

**Amendment to the Specification:**

Please replace example 2 with the following amended paragraph:

**Example 2**

**Effect of Stabilization by Neutralization and Oil Dilution of the PIB on Sultone Formation**

In a falling film reactor,  $\text{SO}_3$  in air was reacted with a mixture of 70 wt% PIB having a Mn of 550 MW and 30 wt% oil (Group I 100 Neutral Oil) using the following conditions:  $\text{SO}_3/\text{PIB}$  molar ratio = 0.900; feed temperature = 90°C.; reactor temperature = 67.5°C.;  $\text{SO}_3$  concentration in air = 1.4%;  $\text{SO}_3$  loading = 0.347  $\text{kg.cm}^{-\text{hr}}$ ;  $\text{SO}_3/\text{Air}$  gas inlet temperature = 50°C.; PIB feed flow rate = 18.10 kg/hr;  $\text{SO}_3$  flow rate = 1.66 kg/hr. Immediately (within 5 seconds) after formation in the sulfonation reactor, the mixture of PIB sulfonic acid and oil was stabilized by neutralization with a lime-oil slurry (10.6 wt%  $\text{Ca}(\text{OH})_2$  in Group I 100N oil). The degree of neutralization was 145%. After mixing the PIB sulfonic acid with the lime slurry, the mixture was passed through an inline static mizer and then into a stirred tank neutralization vessel held at 72°C. Chromatographic analysis of the stabilized product showed it to contain 26.0 wt% recovered PIB, 4.7 wt% sultones, and 69.3 wt% sulfonic acid, correcting for the diluent oil.